

REMARKS

Upon entry of these amendments, claims 21-38 are pending. Claims 1-20 are canceled without prejudice. Applicants reserve the right to pursue any canceled subject matter in a related application. Supports for new claims can be found in the specification and the claims as originally filed. For example, support for new claims 21-29 can be found in the specification, *e.g.*, at page 6, lines 23-27; support for new claim 30 can be found in the specification, *e.g.*, at page 116, line 1, to page 123; support for new claim 31 can be found in the specification, *e.g.*, at page 6, lines 5-22; support for new claim 32 can be found in the specification, *e.g.*, at page 6, line 39, to page 7, line 13; support for new claim 33 can be found in the specification, *e.g.*, at page 4, lines 7-13; support for new claims 34-36 can be found in the specification, *e.g.*, at page 7, lines 29-33; and support for new claims 37-38 can be found in the specification, *e.g.*, at page 28, lines 8-15. No new matter is introduced.

The Examiner has required an election under 35 U.S.C. § 121 of one of the following inventions:

- I. Claims 1-3 and 15 drawn to an isolated polypeptide, a composition comprising a polypeptide and a kit comprising the said composition, classified in class 530, subclass 350.
- II. Claims 4-9, drawn to a method of determining the presence of polypeptide, classified in class 435, subclass 7.1.
- III. Claim 10, drawn to a method for screening for a modulator of activity comprising administering a compound to a recombinant animal, classified in class 800, subclass 3.
- IV. Claims 11-12, drawn to an antibody, classified in class 530, subclass 587.1.
- V. Claims 13-14 and 17-20, drawn to a nucleic acid molecule, a vector comprising a nucleic acid molecule, a cell comprising a vector comprising a nucleic acid molecule and method of producing a polypeptide, classified in class 435, subclass 69.1.

VI. Claim 16 drawn to a method of treating a pathological state in a mammal, classified in class 514, subclass 12.

The Examiner contends that Groups I - VI are distinct, each from the other.

The Examiner additionally requires that Applicants select an amino acid/nucleic acid sequence that is consonant with the elected invention.

In response, Applicants hereby elect the invention of Group V, Claims 13-14 and 17-20 (new claims 21-38), drawn to a nucleic acid molecule, a vector comprising a nucleic acid molecule, a cell comprising a vector comprising a nucleic acid molecule and method of producing a polypeptide, classified in class 435, subclass 69.1.

Applicants also hereby provisionally elect, with traverse, a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence of SEQ ID NO: 104.

With respect to the Examiner's request of electing a single amino acid/nucleic acid sequence, Applicants respectfully traverse and request that the requirement be withdrawn.

The Examiner's attention is invited to M.P.E.P. § 803.04 (Eighth Edition, August 2001, revised May 2004)

It has been determined that normally ten sequences constitute a reasonable number for examination purposes. Accordingly, in most cases, up to ten independent and distinct nucleotide sequences will be examined in a single application without restriction. In addition to the specifically selected sequences, those sequences which are patentably indistinct from the selected sequences will also be examined.

Thus, at least ten (10) sequences should be examined in the instant application. Moreover, as shown in page 116, line 1, to page 127 of the specification, SEQ ID NOs: 100, 102, 104, 106, 108, 110, 112, and 114 all represent variants or fragments (*e.g.*, cytoplasmic domain) of the NOV9 gene. ClustalW alignments of the NOV9 variants and fragments are shown in Appendix A and B (attached hereto). Applicants submit that to search these sequences together would not be a serious burden on the Examiner. The M.P.E.P. § 803 (Eighth Edition, August 2001, revised February 2003) states:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

Thus, Applicants request that all the nucleic acids encoding SEQ ID NOs: 100, 102, 104, 106, 108, 110, 112, and 114 be elected. In the alternative, Applicants request that election of a single SEQ ID NO be considered a species election, and the remaining SEQ ID NOs of the NOV9 gene be re-entered into the genus once the elected sequence is deemed allowable. Applicant retains the right to petition from the restriction requirement under 37 C.F.R. §1.144.

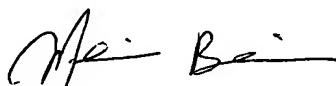
Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim pursuant to 37 C.F.R. § 1.141.

CONCLUSION

Applicants respectfully request that the amendments and remarks made herein be entered and made of record in the file history of the present application. Applicants respectfully submit that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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Appendix A: ClustalW Alignment of NOV9 Variants

1151751	---	---	---
CG56008-02	1	---	---
CG56008-06	1	---	---
SNP13376562	1	---	---
CG56008-05	1	---	---
CG56008-04	1	---	---
CG56008-03	1	MOAAAGWLRGAAPGPRGSSNETTACSRLEVISRRHQWARSEPSQPPVWNQTCARGRAVG	60
1151751	1	---	---
CG56008-02	1	---	---
CG56008-06	6	PNPLLDLDS	33
SNP13376562	1	---	---
CG56008-05	1	---	---
CG56008-04	1	---	---
CG56008-03	61	QRORODEGAMARKLSVILILTFALSVTNPLHELKAAAFPTTEKISPNWESQINVDLAIS	120
1151751	34	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	93
CG56008-02	34	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	93
CG56008-06	66	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	125
SNP13376562	52	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	111
CG56008-05	52	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	111
CG56008-04	52	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	111
CG56008-03	121	TRQVHLQQLFVRYGENHSLSVGEFRKLLQNIIGIDKIKRIHIHHDHDDHSDHEHHSDEHERH	180
1151751	94	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	153
CG56008-02	94	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	153
CG56008-06	126	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	185
SNP13376562	112	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	171
CG56008-05	112	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	171
CG56008-04	112	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	171
CG56008-03	181	SDHEHHSDEHHSDDHDDHSHHNNHAASOKNKRKALCPDHDSDSSGKDPNRSOGKQAH RPEH	227
1151751	154	ASGRNNVKDSVSASEVTSTVYNTVSEOTHFLETIETPRPG	210
CG56008-02	154	ASGRNNVKDSVSASEVTSTVYNTVSEOTHFLETIETPRPG	210
CG56008-06	186	ASGRNNVKDSVSASEVTSTVYNTVSEOTHFLETIETPRPG	242
SNP13376562	172	ASGRNNVKDSVSASEVTSTVYNTVSEOTHFLETIETPRPG	228
CG56008-05	172	ASGRNNVKDSVSASEVTSTVYNTVSEOTHFLETIETPRPG	228
CG56008-04	169	LS...O...LSTSVAVFCHLPHELGDFAVLLKAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	221
CG56008-03	228	LS...O...LSTSVAVFCHLPHELGDFAVLLKAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	287
1151751	211	KSRVSRLAGRTN ESVS EPRKGFMYSRNTNENPQECFNASKLLTSHGMOIQVPLNATEFN	270
CG56008-02	211	KSRVSRLAGRTN ESVS EPRKGFMYSRNTNENPQECFNASKLLTSHGMOIQVPLNATEFN	270
CG56008-06	240	KSRVSRLAGRTN ESVS EPRKGFMYSRNTNENPQECFNASKLLTSHGMOIQVPLNATEFN	302
SNP13376562	229	KSRVSRLAGRTN ESVS EPRKGFMYSRNTNENPQECFNASKLLTSHGMOIQVPLNATEFN	288
CG56008-05	229	KSRVSRLAGRTN ESVS EPRKGFMYSRNTNENPQECFNASKLLTSHGMOIQVPLNATEFN	288
CG56008-04	222	QIFLOHIVAEHYVSMWIFALTAGLFMYVALVDMVPEMLHNDSDHGCSSRWGYFFLQAGMILL	281
CG56008-03	288	QIFLOHIVAEHYVSMWIFALTAGLFMYVALVDMVPEMLHNDSDHGCSSRWGYFFLQAGMILL	347
1151751	271	YLCPAIIINQIDARSLCHTSEKKAEIPPKTYSLQIAWVGGFIAISIIISFLSLGVILVPI	330
CG56008-02	271	YLCPAIIINQIDARSLCHTSEKKAEIPPKTYSLQIAWVGGFIAISIIISFLSLGVILVPI	304
CG56008-06	303	YLCPAIIINQIDARSLCHTSEKKAEIPPKTYSLQIAWVGGFIAISIIISFLSLGVILVPI	362
SNP13376562	289	YLCPAIIINQIDARSLCHTSEKKAEIPPKTYSLQIAWVGGFIAISIIISFLSLGVILVPI	348
CG56008-05	289	YLCPAIIINQIDARSLCHTSEKKAEIPPKTYSLQIAWVGGFIAISIIISFLSLGVILVPI	348
CG56008-04	282	QFOIMLLHLSIFEHKIVFRINF	302
CG56008-03	348	SPPKPPSSQSQPALSGGAEKRRRHSGLDGDNG	382
1151751	331	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	390
CG56008-02	331	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	390
CG56008-06	363	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	422
SNP13376562	349	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	408
CG56008-05	349	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	408
CG56008-04	331	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	390
CG56008-03	331	MNRVFFFKFLSFLVALAVOTLSODAF LHLPHSHASHHH SHSHEEPAMEMKROPLF SHLS	390
1151751	391	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	450
CG56008-02	391	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	450
CG56008-06	423	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	482
SNP13376562	409	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	468
CG56008-05	409	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	468
CG56008-04	391	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	450
CG56008-03	391	SQNIIEESAYFDS TWKGLTALGGLYFMFLVEHVLT L I K Q F K D K K K K N Q K K P E N D D V E I K H	450
1151751	451	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	510
CG56008-02	451	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	510
CG56008-06	483	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	542
SNP13376562	469	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	528
CG56008-05	469	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	528
CG56008-04	451	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	510
CG56008-03	451	QLSKYESQLSTNE EKVD TDDRTEGYLRADSQEP SHFDSQQPAVLBEEVMI AHAHPQEVY	510
1151751	511	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	570
CG56008-02	511	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	570
CG56008-06	543	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	602
SNP13376562	529	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	588
CG56008-05	529	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	588
CG56008-04	511	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	570
CG56008-03	511	NEVYVPRGCKNKCH SHFHD TLGQSDDL IHHHHDYHHI LHHHHHQNHHPH SHSQRYSEELK	570
1151751	571	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	630
CG56008-02	571	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	630
CG56008-06	603	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	662
SNP13376562	589	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	648
CG56008-05	589	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	648
CG56008-04	571	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	630
CG56008-03	571	DAGVATLAWMVMIMGDSHNFSDLAIGAFTEGLSSGLSTSVAVFCHLPHELGDFAVLL	630
1151751	631	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	690
CG56008-02	631	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	690
CG56008-06	663	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	722
SNP13376562	649	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	708
CG56008-05	649	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	708
CG56008-04	631	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	690
CG56008-03	631	KAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYANVSMWIFALTAGLFMYVALVDMVPE	690
1151751	691	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	737
CG56008-02	691	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	737
CG56008-06	723	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	769
SNP13376562	709	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	755
CG56008-05	709	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	755
CG56008-04	691	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	737
CG56008-03	691	MLHNDASDHGCSRWGYFFLQAGMMLLQFGIMLLISIFEHKIVFRINF	737

CG56008-03	1	MGA AAGWLRGAAPG PRGSQSNETTACSLVEISRHHQWARS E PSGPP VWNQTCARGRAVG	60
CG56008-04	***	-----	***
CG56008-03	61	QRGRGDEGAMARKLSVILITFALSVTNPLHELKAAA FPQTTEKISPNWESGINVDLAIS	120
CG56008-04	1	-----MARKLSVILITFALSVTNPLHELKAAA FPQTTEKISPNWESGINVDLAIS	51
CG56008-03	121	TRQYHLQQLFYRYG ENNSLS VEGFRKLLQNIGIDKIKRIHI HHDHDDHSDHEHHS DHERH	180
CG56008-04	52	TRQYHLQQLFYRYG ENNSLS VEGFRKLLQNIGIDKIKRIHI HHDHDDHSDHEHHS DHERH	111
CG56008-03	181	SDHEHHS DHEHHS DHDHHS ----- HHH ----- AAFTEGLSS	212
CG56008-04	112	SDHEHSDHHPHS HSQRYSREELKDAGVATLAWVMVIMGDGLHNFSDGLAIGAAFTTEGLSS	171
CG56008-03	213	GLSTSVAVFCHELPHELGDFAVLLKAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYAEN	272
CG56008-04	172	GLSTSVAVFCHELPHELGDFAVLLKAGMTVKQAVLYNALSAMLAYLGMATGIFIGHYAEN	231
CG56008-03	273	VSMWIFALTAGLFMYVALVDMVPEMLHNDASDHGCSHWGYFFLQNA GMLLGFGIMLLISI	332
CG56008-04	232	VSMWIFALTAGLFMYVALVDMVPEMLHNDASDHGCSRWGYFFLQNA GMLLGFGIMLLISI	291
CG56008-03	333	FEHKIVFRINFNS PPSPPPKPPSSQSOPALLSGGAERCRRRHSGLDGDNG	382
CG56008-04	292	FEHKIVFRINF-----	302

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